

REMARKS

Informalities

Paragraph 1 of the Office Action requests correction of underlined commas in Claims 29 and 93. The amended claims address this error. Paragraph 2 of the Office Action objects to Claims 32, 58, 72 and 98 because the variable X' does not correspond to X in the formulas in the claims. The formula has been amended to specify X'.

Section 112 Objections

a. Section 112, First Paragraph

A number of claims are rejected in Paragraph 4 of the Office Action because the Examiner contends that Applicant has not shown support for the definitions of R" and X' in the specification. Applicants believe the references to R" and X' in the claims and specification (referred as R and X at page 5, line 13 to page 6, line 25, of the specification) are well defined, well known, and easily understood by those of ordinary skill in the art. R" represents organic substituents for classes of compound such as organic alkoxides, carboxylates, amides, etc. (see specification at page 5, line 14, to page 6, line 19) and X' represents an inorganic substituent in Grignard reagent (see specification at page 5, line 18). Therefore, Applicants request that the objection under 35 U.S.C. 112, first paragraph, be removed.

b. Section 112, Second Paragraph

Paragraph 5 of the Office Action rejects a number of claims under 35 U.S.C. 112, second paragraph, as indefinite because the variables m, n, p, and # are "indefinite." In Claim 114 the variables which are not present in the formula have been deleted in the amended claim. Claim 128 has been cancelled.

With regard to the objections to Claims 22, 46, 59, and 86, Applicants believe that the specification defines these terms in a manner that is clear to one of ordinary skill in the art. At page 3, lines 13-20 of the specification, the terms m, n, # are defined. Examples are provided from page 3 through page 5 of the specification. It is clear from these examples that p is used in the same manner as m and n, i.e. an integer which refers to the stoichiometry of the composition. Thus, m, n and p refer to the POSS nanostructures present in a formula. As noted at page 6, line 28 et seq., of the specification, a POSS cage may contain 4 to 18 or more silicon atoms in the

silicon-oxygen framework. Therefore, one of ordinary skill in the art would understand that m, n, and p will sum to a total of from 4 to 18 or more (i.e. one of ordinary skill in the art will understand that the cage size can contain a variable number of silicon atoms). Since # is defined as the number of silicon atoms in the nanostructure, # will be the sum of $m + n + p$, i.e. the total number of silicon atoms in the nanostructure.

Since the meanings of m, n, p and # will be immediately apparent to those of ordinary skill in the art, Applicants' request that the objection under 35 U.S.C. 112, second paragraph, be removed.

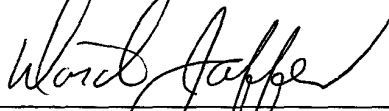
Section 102 Rejection

Claim 128 has been cancelled.

CONCLUSION

Applicants have amended the claims and presented arguments to address the objections raised in the Office Action. Applicants believe the claims as amended are now in condition for allowance. If any further questions should arise prior to a Notice of Allowance, the Examiner is invited to contact the attorney at the number set forth below.

Respectfully submitted,



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I, Judy Keeley, hereby certify that this paper (along with any items referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: MAIL STOP - FEE AMENDMENT, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 2202-3514.

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